## REMARKS

This paper is submitted in response to the pending Office Action mailed on July 13, 2005. Because this amendment is submitted with a certificate of mailing in compliance with 37 C.F.R. §1.8 on or before the shortened statutory period for reply set to expire on **October 13, 2005**, this Response is timely filed.

I. STATUS OF THE CLAIMS

Claims 1, 2, 4 to 9, 11 to 15, 18 to 34 and 36 to 41 are pending in this application, with claims 3, 10, 16, 17 and 35 having been previously canceled. No new claims or claim amendments are presented by this paper. Thus, this Response introduces no new matter or raises any new issues for which an additional search would be required.

It is believed that no additional fees are due in connection with this Response, however, please charge **Deposit Account No. 02-1818** for any fees deemed owed.

II. CLAIM REJECTIONS UNDER 35 U.S.C. §103

Applicants respectfully traverse the rejection of claims 1, 2, 4 to 9, 11 to 15, 18 to 34 and 36 to 41 as obvious[1] over U.S. Patent No.: 4,516,991 (hereinafter "*Kawashima*"). In particular, contrary to the relied upon characterization, *Kawashima* does not disclose, or even suggest, an ion generator that includes, among other things, an ion emitter electrode having a plurality of curves and spans a distance wherein the ion emitter electrode has a length that is at least fifteen percent greater than said distance, as generally recited in the pending independent claims 1, 2, 5, 8, 11, 15, 20, 21, 29, 34 and 41. In other words, the cited reference does not disclose or even suggest that the ion emitter

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[1] To establish a *prima facie* case of obviousness, three basic criteria must be met.

a. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.

b. Second, there must be a reasonable expectation of success.

c. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure.

*In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143 - § 2143.03 for decisions pertinent to each of these criteria.

could be arranged as a (1) slacked, (2) curved, and (3) coiled ion emitter to further increase the emitter surface area and increase the ion generation and emission.

*Kawashima* does not disclose or suggest an ion emitter electrode having a plurality of curves, much less an ion emitter electrode that can stretch or extend fifteen percent. *Kawashima* simply discloses an air cleaning apparatus having a plurality of ionizing wires 20 spaced apart from a plurality of staggered dust collecting electrodes 11, 12. In particular, the wires or electrodes:

> are formed of tungsten wires having approx. 1 mil of thickness, and are treated with noble metal plating layer of gold similarly to the above. **Each wire 20 has a coil spring 21 elastically extended at the lower portion thereof.** The lower end of each spring 21 is engaged with a hole 18a provided in the frame 18, and the upper end of each wire 20 is engaged fixedly by a screw 22 with the frame 18. The wire 20 is defined in the position spaced at a predetermined distance such as, for example, approx. 20 mm from a line for connecting the front edges 11a of the electrodes 11 on the front extension line of the respective electrodes 12. The position of the wire can be readily defined by elastically engaging the spring 21.[2]

Thus, it is clear that contrary to the relied upon characterization, the ion source is the tungsten wire and not the coil spring elastically affixed to one end of the tungsten wire. Furthermore, Applicants submit that the coil spring stretches the tungsten wire between opposing portions of the frame 18 to ensure that the ion source or tungsten wire is aligned, straight and taunt (thereby eliminating slack, curves, etc. from the tungsten wire). It should be noted that *Kawashima* is completely silent regarding the ability of the tungsten wire to stretch in any manner.

Because *Kawashima* does not disclose, or even suggest, an ion emitter having a plurality of curves, much less an ion emitter electrode that can stretch or extend fifteen percent, *Kawashima* is not a proper basis for establishing a *prima facie* case of obviousness. Moreover, because *Kawashima* does not recognize the advantages realized through utilizing an ion emitter electrode arranged as a (1) slacked, (2) curved, and (3) coiled ion emitter, there exists no suggestion or motivation within *Kawashima*, or the

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[2] See *Kawashima* at col. 4, lines 20 to 34, (emphasis added).

knowledge available to a person of ordinary skill in the art, to attempt to modify the tungsten wire to increase the emitter surface area and increase the ion generation and emission. For all of these reasons, Applicants submit that the claims 1, 2, 4 to 9, 11 to 15, 18 to 34 and 36 to 41 are not anticipated or rendered obvious by *Kawashima*.

## III. CONCLUSION

In light of the foregoing comments, Applicants assert that the application is in condition for allowance. Thus, Applicants request consideration of these comments and remarks and issuance of a Notice of Allowance of claims 1, 2, 4 to 9, 11 to 15, 18 to 34 and 36 to 41. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting prosecution of this application.

Respectfully submitted,

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